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result set

DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ

<u>L19</u>	l17 and L18	28	<u>L19</u>
<u>L18</u>	((504/206)!.CCLS.)	239	<u>L18</u>
<u>L17</u>	l1 and L16	230	<u>L17</u>
<u>L16</u>	l2 with l6	4059	<u>L16</u>
<u>L15</u>	l1 and L14	2	<u>L15</u>
<u>L14</u>	l6 near5 L13	26	<u>L14</u>
<u>L13</u>	sunflower or rapeseed	19914	<u>L13</u>
<u>L12</u>	l1 and L11	22	<u>L12</u>
<u>L11</u>	l3 with l6	304	<u>L11</u>
<u>L10</u>	l2 and L9	22	<u>L10</u>
<u>L9</u>	l1 and L8	23	<u>L9</u>
<u>L8</u>	l3 same L6	588	<u>L8</u>
<u>L7</u>	l2 same L6	7385	<u>L7</u>
<u>L6</u>	l4 or l5	210156	<u>L6</u>
<u>L5</u>	polyethoxy\$6 or polyoxyethyl\$5	77162	<u>L5</u>
<u>L4</u>	ethoxy\$6 or oxyethyl\$5 or eo	163842	<u>L4</u>
<u>L3</u>	oil\$1 with (sunflower or rapeseed)	13322	<u>L3</u>
<u>L2</u>	oil\$1 with (vegetable or linseed or soybeen or corn or peanut or copra or olive or palm)	99596	<u>L2</u>
<u>L1</u>	glyphosate OR (roundup or spator or muster or glifonox or glycel) OR (phosphonomethylglycine or ((phosphonomethyl or (phosphono methyl)) glycine))	5462	<u>L1</u>

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 10 of 22 returned.**☐ 1. Document ID: US 20020026048 A1

L10: Entry 1 of 22

File: PGPB

Feb 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020026048

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020026048 A1

TITLE: Pyridazinone derivatives

PUBLICATION-DATE: February 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Komori, Takashi	Osaka		JP	

US-CL-CURRENT: 544/239; 504/238, 544/237

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 2. Document ID: US 20020013466 A1

L10: Entry 2 of 22

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013466

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020013466 A1

TITLE: Uracil compounds and use thereof

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tohyama, Yoshitomo	Ashiya-shi		JP	
Sanemitsu, Yuzuru	Kobe-shi		JP	
Gotou, Tomohiko	Osaka		JP	

US-CL-CURRENT: 544/311

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 3. Document ID: US 6482773 B1

L10: Entry 3 of 22

File: USPT

Nov 19, 2002

US-PAT-NO: 6482773

DOCUMENT-IDENTIFIER: US 6482773 B1

TITLE: Pyridazin-3-one derivatives, their use, and intermediates for their production

DATE-ISSUED: November 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katayama; Tadashi	Toyonaka			JP
Kawamura; Shinichi	Osaka			JP
Sanemitsu; Yuzuru	Kobe			JP
Mine; Yoko	Tanashi			JP

US-CL-CURRENT: 504/225; 544/105

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 4. Document ID: US 6475955 B2

L10: Entry 4 of 22

File: USPT

Nov 5, 2002

US-PAT-NO: 6475955

DOCUMENT-IDENTIFIER: US 6475955 B2

TITLE: Pyridazinone derivatives

DATE-ISSUED: November 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Komori; Takashi	Toyonaka			JP

US-CL-CURRENT: 504/238; 544/239, 544/241

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 5. Document ID: US 6451740 B2

L10: Entry 5 of 22

File: USPT

Sep 17, 2002

US-PAT-NO: 6451740

DOCUMENT-IDENTIFIER: US 6451740 B2

TITLE: Uracil compounds and use thereof

DATE-ISSUED: September 17, 2002

INVENTOR-INFORMATION:

US-CL-CURRENT: 504/243; 544/312, 544/314

☒ 6. Document ID: US 6423667 B1

Jul 23, 2002

NAME	CITY	STATE	ZIP CODE	COUNTRY
Highsmith; Ronald Earl	Chesterfield	VA		

US-CL-CURRENT: 504/362; 516/33, 71/63

☐ 7. Document ID: US 6410484 B1

Jun 25, 2002

NAME	CITY	STATE	ZIP CODE	COUNTRY
Takano; Minoru	Kameoka			JP
Mishima; Hirofumi	Minoo			JP

US-CL-CURRENT: 504/221; 504/225, 504/243, 544/105, 544/295, 544/309, 544/310,
544/312, 544/314, 544/52

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
Draw	Desc	Image								

☐ 8. Document ID: US 6403534 B1

L10: Entry 8 of 22

File: USPT

Jun 11, 2002

US-PAT-NO: 6403534

DOCUMENT-IDENTIFIER: US 6403534 B1

TITLE: Uracil compounds and use thereof

DATE-ISSUED: June 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Komori; Takashi	Toyonaka			JP
Sanemitsu; Yuzuru	Kobe			JP

US-CL-CURRENT: 504/243; 544/312, 544/314

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC

☐ 9. Document ID: US 6348628 B1

L10: Entry 9 of 22

File: USPT

Feb 19, 2002

US-PAT-NO: 6348628

DOCUMENT-IDENTIFIER: US 6348628 B1

TITLE: Pyridazin-3-one derivatives, their use, and intermediates for their production

DATE-ISSUED: February 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katayama; Tadashi	Toyonaka			JP
Kawamura; Shinichi	Osaka			JP
Sanemitsu; Yuzuru	Kobe			JP
Mine; Yoko	Tanashi			JP

US-CL-CURRENT: 564/251; 544/159, 544/162, 546/226, 546/231, 548/540, 548/566

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 10. Document ID: US 6242634 B1

L10: Entry 10 of 22

File: USPT

Jun 5, 2001

US-PAT-NO: 6242634

DOCUMENT-IDENTIFIER: US 6242634 B1

TITLE: Pyrimidin-4-one derivatives, their use, intermediates for their production,

and processes for producing these intermediates

DATE-ISSUED: June 5, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Enomoto; Masayuki	Takarazuka			JP
Hoshi; Hisayuki	Toyonaka			JP
Sanemitsu; Yuzuru	Kobe			JP

US-CL-CURRENT: 558/388; 558/389, 558/396, 558/398, 558/399, 558/406, 558/409,
558/410, 560/47, 560/55, 560/83, 560/9, 564/442, 568/25, 568/663

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMTC
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Display Format: - Change Format

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WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 11 through 20 of 22 returned.**☐ 11. Document ID: US 6191070 B1

L10: Entry 11 of 22

File: USPT

Feb 20, 2001

US-PAT-NO: 6191070

DOCUMENT-IDENTIFIER: US 6191070 B1

TITLE: Pyrimidinone derivatives and herbicides containing them

DATE-ISSUED: February 20, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Komori; Takashi	Toyonaka			JP
Hoshi; Hisayuki	Toyonaka			JP

US-CL-CURRENT: [504/243](#); [504/203](#), [544/311](#), [544/312](#), [544/313](#), [544/314](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMIC](#)☐ 12. Document ID: US 6187920 B1

L10: Entry 12 of 22

File: USPT

Feb 13, 2001

US-PAT-NO: 6187920

DOCUMENT-IDENTIFIER: US 6187920 B1

TITLE: Pyridazinone derivatives

DATE-ISSUED: February 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Komori; Takashi	Toyonaka			JP

US-CL-CURRENT: [544/239](#); [504/238](#), [544/237](#), [544/238](#), [560/168](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

[KMIC](#)☐ 13. Document ID: US 6114286 A

L10: Entry 13 of 22

File: USPT

Sep 5, 2000

US-PAT-NO: 6114286

DOCUMENT-IDENTIFIER: US 6114286 A

TITLE: Pyrimidinone derivatives

DATE-ISSUED: September 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Takano; Minoru	Kameoka			JP

US-CL-CURRENT: 504/240; 504/241, 544/281, 544/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 14. Document ID: US 6107250 A

L10: Entry 14 of 22

File: USPT

Aug 22, 2000

US-PAT-NO: 6107250

DOCUMENT-IDENTIFIER: US 6107250 A

TITLE: Pyridazin-3-one derivatives and their use

DATE-ISSUED: August 22, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tohyama; Yoshitomo	Ashiya			JP
Enomoto; Masayuki	Takarazuka			JP
Hoshi; Hisayuki	Toyonaka			JP

US-CL-CURRENT: 504/238; 544/239

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
Draw Desc	Image									

☐ 15. Document ID: US 6100257 A

L10: Entry 15 of 22

File: USPT

Aug 8, 2000

US-PAT-NO: 6100257

DOCUMENT-IDENTIFIER: US 6100257 A

TITLE: Pyrimidin-4-one derivatives, their intermediates for their production and processes for producing these compounds

DATE-ISSUED: August 8, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Enomoto; Masayuki	Takarazuka			JP
Hoshi; Hisayuki	Toyonaka			JP
Sanemitsu; Yuzuru	Kobe			JP

US-CL-CURRENT: [514/231.5](#); [514/269](#), [544/123](#), [544/319](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 16. Document ID: US 6090753 A

L10: Entry 16 of 22

File: USPT

Jul 18, 2000

US-PAT-NO: 6090753

DOCUMENT-IDENTIFIER: US 6090753 A

TITLE: Pyridazin-3-one derivatives, their use, and intermediates for their production

DATE-ISSUED: July 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katayama; Tadashi	Toyonaka			JP
Kawamura; Shinichi	Osaka			JP
Sanemitsu; Yuzuru	Kobe			JP
Mine; Yoko	Tanashi			JP

US-CL-CURRENT: [504/238](#); [504/221](#), [504/225](#), [544/105](#), [544/114](#), [544/238](#), [544/239](#), [544/58.5](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 17. Document ID: US 6015774 A

L10: Entry 17 of 22

File: USPT

Jan 18, 2000

US-PAT-NO: 6015774

DOCUMENT-IDENTIFIER: US 6015774 A

TITLE: Pyrazin-2-one derivatives, their use, and intermediates for their production

DATE-ISSUED: January 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shuto; Akira	Ashiya			JP
Hoshi; Hisayuki	Toyonaka			JP
Sanemitsu; Yuzuru	Kobe			JP

US-CL-CURRENT: [504/221](#); [504/225](#), [504/235](#), [544/105](#), [544/354](#), [544/405](#), [544/408](#), [544/52](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 18. Document ID: US 5998334 A

L10: Entry 18 of 22

File: USPT

Dec 7, 1999

US-PAT-NO: 5998334

DOCUMENT-IDENTIFIER: US 5998334 A

TITLE: Pyrazole compounds, processes for their production and herbicides containing them

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Murai; Shigeo	Kusatsu			JP
Kikugawa; Hiroshi	Kusatsu			JP
Nakayama; Hitoshi	Kusatsu			JP
Sano; Makiko	Kusatsu			JP
Isogai; Akihiko	Kusatsu			JP

US-CL-CURRENT: 504/282; 546/276.1, 548/369.4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMIC

☐ 19. Document ID: US 5998333 A

L10: Entry 19 of 22

File: USPT

Dec 7, 1999

US-PAT-NO: 5998333

DOCUMENT-IDENTIFIER: US 5998333 A

TITLE: Pyrimidinone derivatives and herbicides containing them

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Komori; Takashi	Toyonaka			JP
Hoshi; Hisayuki	Toyonaka			JP

US-CL-CURRENT: 504/240; 504/241, 544/279, 544/281, 544/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMIC

☐ 20. Document ID: US 5869428 A

L10: Entry 20 of 22

File: USPT

Feb 9, 1999

US-PAT-NO: 5869428

DOCUMENT-IDENTIFIER: US 5869428 A

TITLE: Pyridonesulfonylurea compounds, process for their production and herbicides containing them

DATE-ISSUED: February 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Morishima; Yasuo	Kobe			JP
Murai; Shigeo	Kusatsu			JP
Aoyama; Yoshiyuki	Kusatsu			JP
Sasaki; Hiroshi	Kusatsu			JP
Kikugawa; Hiroshi	Kusatsu			JP
Nagayama; Soichiro	Kusatsu			JP
Mitani; Makiko	Kusatsu			JP

US-CL-CURRENT: 504/215; 544/320, 544/321, 544/324, 544/331

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Terms	Documents
12 and L9	22

Display Format:

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WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 21 through 22 of 22 returned.**☐ 21. Document ID: US 5698492 A

L10: Entry 21 of 22

File: USPT

Dec 16, 1997

US-PAT-NO: 5698492

DOCUMENT-IDENTIFIER: US 5698492 A

TITLE: Herbicidal composition containing 2-(4-chloro-2-fluoro-5-(N-pentyloxy carbonylmethoxy)-4,5,6,7-tetrahydro-2H-isoindole-1,3-dione

DATE-ISSUED: December 16, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sakaki; Masaharu	Osaka			JP
Saitoh; Kazuo	Osaka			JP

US-CL-CURRENT: [504/128](#); [504/204](#), [504/205](#), [504/206](#), [504/286](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
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☐ 22. Document ID: WO 200100028 A1 EP 1191848 A1 FR 2795290 A1 AU 200059897 A

L10: Entry 22 of 22

File: DWPI

Jan 4, 2001

DERWENT-ACC-NO: 2001-168301

DERWENT-WEEK: 200230

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TITLE: Compositions contain glyphosate and an ethoxylated vegetable oil or an ester of this, to give improved foliar penetration

INVENTOR: BRANCO, B; GAUVRIT, C ; MILIUS, A ; MULLER, T

PRIORITY-DATA: 1999FR-0008010 (June 23, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200100028 A1	January 4, 2001	F	019	A01N057/20
EP 1191848 A1	April 3, 2002	F	000	A01N057/20
FR 2795290 A1	December 29, 2000		000	A01N057/04
AU 200059897 A	January 31, 2001		000	A01N057/20

INT-CL (IPC): [A01 N 25/02](#); [A01 N 25/04](#); [A01 N 25/30](#); [A01 N 25:02](#); [A01 N 57/04](#); [A01 N 57/20](#); [A01 N 25:30](#); [A01 N 57/20](#); [A01 N 57/20](#); [A01 N 25:30](#); [A01 N 25:02](#)

☐

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Jul 23, 2002

TITLE: Ammonium sulfate suspensions in oils

Timely and judicious use of herbicides can provide weed control to minimize crop losses and production costs. Herbicides such as glyphosate (N-phosphonomethyl glycine) and many others are useful for control of a large variety of weeds. When used in an herbicidal composition, glyphosate is generally in the form of one of its various salts in solution, preferably an aqueous solution.

Adjuvants are materials that enhance the action of herbicides by promoting adsorption and translocation and by complexing antagonistic metal ions in the water used to make the herbicide solution. Ammonium sulfate has been known as an adjuvant. for several decades (U. Suwunnamek and D Penner, Weed Research, 15, 13-19 (1975)). It is perhaps the most important commercial adjuvant and is also widely used as a fertilizer. Several different types of oils have also been found to act as adjuvants. However, mineral oil has been reported to decrease the activity of glyphosate herbicide (H. De Ruiter et al., Cent. Agrobiol. Res., Wageningen, Neth., Meded. Fac., Landbouwwet, Rijksuniv. Gent, 52(3B) 1217-24 (1987)).

Petroleum distillates, corn oil, soybean oil, coconut oil, cotton seed oil and similar oils are suitable liquids for preparing the ammonium sulfate suspensions of the invention. The viscosity of the liquid should be at least about 5 centipoise (cp) and preferably at least about 10 cp at 40.degree. C. Low viscosity (ca. 1 cp) petroleum fractions such as hexane and octane were not found suitable for preparing these suspensions. Medium viscosity distillates such as the commercially available Isopar.RTM. series by Exxon Chemical Co. enabled preparation of a suspension, but upon sitting for a few hours following agitation or stirring, separation of some free liquid was noted. The Isopar.RTM. series are primarily branched hydrocarbons with viscosities typically less than 3 cp.

Cotton seed oil, corn oil, coconut oil, and soybean oil may also be used in the suspensions of the invention. Corn oil has a viscosity of about 200 cp at 25.degree. C. Soybean oil is preferred over cottonseed oil and corn oil because it has one of the lowest costs. Soybean oil has a viscosity of about 80cp at 25.degree. C. Epoxidized soybean oil is higher in cost but is more resistant to microbial degradation and may also be used. Other useful oils include petroleum oils, polyoxyethylated castor oil, cod liver oil, epoxidized linseed oil, fish oil, oils derived from plants and animals, mineral oil, sperm oil, tall oil, wintergreen oil, and rapeseed oil.

A suspension of the invention is prepared containing 58.9 wt. % of the ammonium sulfate described in Example 1, 36.6 wt. % of corn oil having a viscosity of 200 cp at 25.degree. C. and 4.4 wt. % of Tween.RTM. 85 surfactant. The suspension is stable showing no phase separation in 48 hours.

The suspension of the invention consists of 57.9 wt. % ammonium sulfate, 37.4 wt. %

Detailed Description Text (76):

Detailed Description Text (77):

Detailed Description Text (78):

Detailed Description Paragraph Table (14):

Other Reference Publication (1):

Other Reference Publication (2):

CLAIMS :

15. The ammonium sulfate suspension of claim 1, wherein the non-polar oil is at least one member of the group consisting of cotton seed oil, corn oil, coconut oil, soybean oil, epoxidized soybean oil and a hydrocarbon oil.

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L10: Entry 22 of 22

File: DWPI

Jan 4, 2001

DERWENT-ACC-NO: 2001-168301

DERWENT-WEEK: 200230

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App's

TITLE: Compositions contain glyphosate and an ethoxylated vegetable oil or an ester of this, to give improved foliar penetration

INVENTOR: BRANCO, B; GAUVRIT, C ; MILIUS, A ; MULLER, T

PATENT-ASSIGNEE: INST NAT RECH AGRONOMIQUE (INRG), SEPPIC SOC EXPL PROD IND CHIM (SEPP), INRA INST NAT RECH AGRONOMIQUE (INRG)

PRIORITY-DATA: 1999FR-0008010 (June 23, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200100028 A1	January 4, 2001	F	019	A01N057/20
EP 1191848 A1	April 3, 2002	F	000	A01N057/20
FR 2795290 A1	December 29, 2000		000	A01N057/04
AU 200059897 A	January 31, 2001		000	A01N057/20

DESIGNATED-STATES: AU CA CN JP US ZA AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200100028A1	June 22, 2000	2000WO-FR01740	
EP 1191848A1	June 22, 2000	2000EP-0945986	
EP 1191848A1	June 22, 2000	2000WO-FR01740	
EP 1191848A1		WO 200100028	Based on
FR 2795290A1	June 23, 1999	1999FR-0008010	
AU 200059897A	June 22, 2000	2000AU-0059897	
AU 200059897A		WO 200100028	Based on

INT-CL (IPC): A01 N 25/02; A01 N 25/04; A01 N 25/30; A01 N 25:02; A01 N 57/04; A01 N 57/20; A01 N 25:30; A01 N 57/20; A01 N 57/20; A01 N 25:30; A01 N 25:02

ABSTRACTED-PUB-NO: WO 200100028A

BASIC-ABSTRACT:

NOVELTY - Compositions containing a water-soluble phytosanitary active material (I), a modified vegetable oil (II), and their use by foliar absorption.

DETAILED DESCRIPTION - The active material (I) preferably contains the group --(=O)-CH₂-N-CH₂-P(=O), especially water-soluble salts of glyphosate (N-phosphonomethyl glycine). The modified oil (II) is ethoxylated and has an ethylene oxide (EO) index of 20 - 60, especially 30 - 50, or it is a methyl, ethyl, propyl or butyl ester of such an oil, having an EO index of 5 - 50, especially 6 - 20. The

vegetable oil from which (II) is prepared is preferably sunflower, linseed, soja, maize, peanut, copra, olive, palm, hydrogenated palm, or colza oils. The use of modified sunflower or colza oils is preferred. If desired, to improve its properties in cold weather, the oil may be mixed with 1 - 10% by weight of glycerol prior to alkoxylation.

ACTIVITY - Herbicide.

The foliar penetration into barley of compositions containing ethoxylated colza oil and glyphosate labeled with C14 was examined. Using modified colza oil with an EO index of 6, the penetration was 5% after 6 hours, 25% after 24 hours, and 42% after 72 hours. Using modified colza oil with an EO index of 40, the penetration was 34% after 6 hours, 70% after 24 hours, and 65% after 72 hours.

MECHANISM OF ACTION - None given.

USE - Phytosanitary compositions active by foliar absorption.

ADVANTAGE - Improved foliar penetration, the new compositions being more rapid in their action than commercial products.

ABSTRACTED-PUB-NO: WO 200100028A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: A97 C01 C07

CPI-CODES: A05-H03; A10-E07; A12-V03A; C04-B01C1; C05-B01G; C14-V01;

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 2 of 2 returned.**☒ 1. Document ID: US 6380135 B1

L15: Entry 1 of 2

File: USPT

Apr 30, 2002

US-PAT-NO: 6380135

DOCUMENT-IDENTIFIER: US 6380135 B1

TITLE: Agrochemical compositions

DATE-ISSUED: April 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Reuter; Karl	Freiburg			DE
Krueger; Christian	Grenzach-Wyhlen			DE

US-CL-CURRENT: 504/366; 504/367, 514/944, 514/951, 514/952

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMC](#)☒ 2. Document ID: US 4681900 A

L15: Entry 2 of 2

File: USPT

Jul 21, 1987

US-PAT-NO: 4681900

DOCUMENT-IDENTIFIER: US 4681900 A

TITLE: Biocide activator

DATE-ISSUED: July 21, 1987

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Iwasaki; Tetsuji	Wakayama			JP

US-CL-CURRENT: 514/786; 504/364, 514/567, 514/785, 554/227

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L15: Entry 1 of 2

File: USPT

Apr 30, 2002

DOCUMENT-IDENTIFIER: US 6380135 B1

TITLE: Agrochemical compositions

Detailed Description Text (18):

Herbicides such as chlortoluron, bifenox, bromoxynil and its octanoate, ioxynil and its octanoate, fluometuron, glufosinate, glyphosate, pendimetalin, sulcotrione, 3-phenyl-4-hydroxy-6-chlorpyridazine, alachlor, dimethenamide, metolachlor, (S)-metolachlor (enantiomer), or sulfonyl-ureas such as bensulfuron, primisulfuron, prosulfuron, triasulfuron, pyrazosulfuron, nicosulfuron, rimsulfuron, thifensulfuron, triflusulfuron, oxasulfuron, cinosulfuron; furtheron atrazine, propaquizafop, trinexapac-ethyl, pyridate, dicamba, clodinafop, fenclorin. Preference is given to fluometuron, glufosinate, glyphosate, sulcotrione, 3-phenyl-4-hydroxy-6-chlorpyridazin, dimethenamid, metolachlor, (S)-metolachlor, triasulfuron, nicosulfuron or rimsulfuron.

Detailed Description Text (19):

The components in the mixture may be solid or liquid, surface-active substances. These surface-active substances are preferably anionic surfactants from the series of fat alcohol ether sulphonates, such as lauryl ether sulphates, sulphosuccinates, sulphonated naphthalene/formaldehyde condensates and alkylaryl sulphonates, or non-ionic surfactants from the series of alkylphenol ethoxylates, such as nonylphenol ethoxylates, fat alcohol ethoxylates such as oleyl alcohol ethoxylates or lauryl alcohol ethoxylates, fat amine ethoxylates and mixtures thereof, ethoxylated oils such as ethoxylated castor oil and rapeseed oil, ethoxylated fatty acid methyl esters, sorbitan esters and ethoxylated sorbitan esters, alkyl- and alkylaryl-polyethylene oxide phosphoric acid esters, ethoxylated polyethylene glycols, ethylene oxide/propylene oxide adducts, alkyl-succinic acid anhydride condensates, fatty acid amide ethoxylates, alkyl-polyglycosides or silicone surfactants.

CLAIMS:

6. The granulated material of claim 5, characterized in that the herbicide is selected from the group consisting of fluometuron, glufosinate, glyphosate, sulcotrione, 3-phenyl-4-hydroxy-6-chlorpyridazine, dimethenamide, metolachlor, (S)-metolachlor, triasulfuron, nicosulfuron, and rimsulfuron.

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End of Result Set



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L15: Entry 2 of 2

File: USPT

Jul 21, 1987

DOCUMENT-IDENTIFIER: US 4681900 A

TITLE: Biocide activator

Brief Summary Text (21):

The activator of the invention can be used with herbicides such as Stam (3,4-dichloropropionanilide), Saturn (S-(4-chlorobenzyl)-N,N-diethylthiolcarbamate), Lasso (2-chloro-2',6'-diethyl-N-(methoxymethyl)-acentanilide), Glyphosate (N-(phosphonomethyl)glycine isopropylamine salt), DCMU (3-(3,4-dichlorophenyl)-1,1-dimethylurea) and Gramoxone (1,1-dimethyl-4,4'-dipyridium dichloride), and with plant growth regulators such as MH (maleic hydrazide) and Ethrel (2-chloroethyl phosphate).

Detailed Description Paragraph Table (1):

Example 1 Sumithion 55% xylene 15 polyoxypropylene (5) polyoxyethylene (40) olive 20 oil/glycerol (0.5/0.5) ester Emulsifier 1 10 Comparative Example 1 Sumithion 55% xylene 35% Emulsifier 2 10 Example 2 Fenvalerate 20% xylene 44 polyoxypropylene (20) polyoxyethylene (60) bone 30 oil/glycerol (0.5/0.5) ester Emulsifier 3 6 Comparative Example 2 Fenvalerate 20% xylene 74 Emulsifier 4 6 Example 3 Bassa 55% xylene 15 polyoxyethylene (10) polyoxypropylene (20) 20 rapeseed oil/sorbitol (0.5/0.5) ester Emulsifier 5 10 Comparative Example 3 Bassa 55% xylene 15 polyoxyethylene (20) rapeseed oil/sorbitol 20 (0.5/0.5) ester Emulsifier 6 10 Example 4 Omite 40% xylene 30 polyoxypropylene (10) beef tallow/sorbitol 20 (0.5/0.5) ester Emulsifier 7 10 Comparative Example 4 Omite 40% xylene 30 polyoxyethylene (10) beef tallow/sorbitol 20 (0.5/0.5) ester Emulsifier 8 10 Example 5 Kelthane 40% xylene 30 polyoxyethylene (35) polyoxypropylene (5) fish 20 oil/pentaerythritol (0.5/0.5) ester Emulsifier 9 10 Comparative Example 5 Kelthane 40% xylene 50 Emulsifier 10 10 Example 6 Hinosan 55% xylene 15 polyoxypropylene (30) lard/glycerol 20 (0.5/0.5) ester Emulsifier 11 10 Comparative Example 6 Hinosan 55% xylene 35 Emulsifier 12 10 Example 7 Daconol 50% polyoxyethylene (30) polyoxypropylene (10) 20 coconut oil/glucose (0.5/0.5) ester clay 26 Dispersant 1 4 Comparative Example 7 Daconol 50% clay 46 Dispersant 1 4 Example 8 Saturn 55% polyoxyethylene (10) polyoxypropylene (10) 20 coconut oil/glycerol (0.5/0.5) ester xylene 15 Emulsifier 13 10 Comparative Example 8 Saturn 55% xylene 40 Emulsifier 14 5 Example 9 potassium maleic hydrazide 22% polyoxypropylene (40) polyoxyethylene (20) 25 olive oil/glycerol (0.5/0.5) ester water 53 Comparative Example 9 potassium maleic hydrazide 22% polyoxyethylene nonylphenol ether 25 water 53

The compositions of the Emulsifiers 1 to 14 and the Dispersant 1 used in the above examples were as follows

Emulsifier 1 alkylbenzenesulfonate 32% polyoxyethylene (11) nonylphenol ether 16 polyoxyethylene (20) styrenated phenol ether 52 Emulsifier 2 alkylbenzenesulfonate 32% polyoxyethylene (11) nonylphenol ether 28 polyoxyethylene (20) styrenated phenol ether 40 Emulsifier 3 alkylbenzenesulfonate 30% polyoxyethylene (15) nonylphenol ether 20 polyoxyethylene (20) oleyl ester 50 Emulsifier 4 alkylbenzenesulfonate 30% polyoxyethylene (15) nonylphenol ether 35 polyoxyethylene (20) oleyl ester 35 Emulsifier 5 alkylbenzenesulfonate 32% polyoxyethylene (10) nonylphenol ether 20 polyoxyethylene (25) styrenated phenol ether 48 Emulsifier 6 alkylbenzenesulfonate 32% polyoxyethylene (10) nonylphenol ether 10 polyoxyethylene (25) styrenated phenol ether 58 Emulsifier 7 alkylbenzenesulfonate 30% polyoxyethylene (20) oleyl ester 30 polyoxyethylene (16) tribenzylphenol ether 40 Emulsifier 8 alkylbenzenesulfonate 30% polyoxyethylene (20) oleyl ester 45 polyoxyethylene (16) tribenzylphenol ether 25

Emulsifier 9 alkylbenzenesulfonate 25% polyoxyethylene (20) nonylphenol ether 25 polyoxyethylene (35) styrenated phenol ether 50 Emulsifier 10 alkylbenzenesulfonate 25% polyoxyethylene (20) nonylphenol ether 40 polyoxyethylene (35) styrenated phenol ether 35 Emulsifier 11 alkylbenzenesulfonate 30% polyoxyethylene (15) styrenated phenol ether 30 polyoxyethylene (15) oleyl ester 40 Emulsifier 12 alkylbenzenesulfonate 30% polyoxyethylene (15) styrenated phenol ether 10 polyoxyethylene (15) oleyl ester 60 Emulsifier 13 alkylbenzenesulfonate 30% polyoxyethylene (11) nonylphenol ether 15 polyoxyethylene (30) styrenated phenol ether 55 Emulsifier 14 alkylbenzenesulfonate 30% polyoxyethylene (11) nonylphenol ether 25 polyoxyethylene (30) styrenated phenol ether 45 Dispersant 1 ammonium sulfate salt of naphthalene/ 50% formaldehyde condensate sodium lauryl sulfate 50

CLAIMS:

11. A composition as claimed in claim 10, wherein said activator is selected from the group consisting of polyoxypropylene polyoxyethylene olive oil/glycerol ester, polyoxypropylene polyoxyethylene bone oil/glycerol ester, polyoxypropylene polyoxyethylene rapeseed oil/sorbitol ester, polyoxypropylene beef tallow/sorbitol ester, polyoxypropylene polyoxyethylene fish oil/pentaerythritol ester, polyoxypropylene lard/glycerol ester, polyoxypropylene polyoxyethylene coconut oil/glucose ester, and polyoxypropylene polyoxyethylene coconut oil/glycerol ester.

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 10 of 28 returned.**☐ 1. Document ID: US 20010031703 A1

L19: Entry 1 of 28

File: PGPB

Oct 18, 2001

PGPUB-DOCUMENT-NUMBER: 20010031703

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010031703 A1

TITLE: Aqueous pesticidal composition

PUBLICATION-DATE: October 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ueda, Nobuhito	Ashiya-shi		JP	

US-CL-CURRENT: 504/127; 504/128, 504/206

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMC](#)☒ 2. Document ID: US 6180566 B1

L19: Entry 2 of 28

File: USPT

Jan 30, 2001

US-PAT-NO: 6180566

DOCUMENT-IDENTIFIER: US 6180566 B1

TITLE: Herbicide preparation, a process for producing it and an activating additive for application therewith

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nielsen; Erik	Greve			DK
Oxb.o slashed.1; Arne	R.o slashed.dovre			DK

US-CL-CURRENT: 504/206; 504/363

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMC](#)☐ 3. Document ID: US 5795847 A

L19: Entry 3 of 28

File: USPT

Aug 18, 1998

US-PAT-NO: 5795847

DOCUMENT-IDENTIFIER: US 5795847 A

TITLE: Herbicide preparation, a process for producing it and an activating additive for application therewith

DATE-ISSUED: August 18, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nielsen; Erik	Greve			DK
Oxb.o slashed.l; Arne	R.o slashed.dovre			DK

US-CL-CURRENT: 504/206

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 4. Document ID: US 5698492 A

L19: Entry 4 of 28

File: USPT

Dec 16, 1997

US-PAT-NO: 5698492

DOCUMENT-IDENTIFIER: US 5698492 A

TITLE: Herbicidal composition containing 2-(4-chloro-2-fluoro-5-(N-pentyloxy carbonylmethoxy)-4,5,6,7-tetrahydro-2H-isoindole-1,3-dione

DATE-ISSUED: December 16, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sakaki; Masaharu	Osaka			JP
Saitoh; Kazuo	Osaka			JP

US-CL-CURRENT: 504/128; 504/204, 504/205, 504/206, 504/286

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 5. Document ID: US 5250500 A

L19: Entry 5 of 28

File: USPT

Oct 5, 1993

US-PAT-NO: 5250500

DOCUMENT-IDENTIFIER: US 5250500 A

TITLE: Herbicidal compositions containing tetrapotassium pyrophosphate as spray adjuvant

DATE-ISSUED: October 5, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jones; Travis R.	Memphis	TN		
Gates; E. Robert	Memphis	TN		

US-CL-CURRENT: 504/165; 504/192, 504/206, 504/352, 504/362

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 6. Document ID: US 4990175 A

L19: Entry 6 of 28

File: USPT

Feb 5, 1991

US-PAT-NO: 4990175

DOCUMENT-IDENTIFIER: US 4990175 A

TITLE: Foliar applied herbicidal compositions containing a silicone glycolsilicone alkane terpolymer adjuvant

DATE-ISSUED: February 5, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Petroff; Lenin J.	Bay County	MI		
Romenesko; David J.	Midland County	MI		
Ekeland; Robert A.	Midland County	MI		

US-CL-CURRENT: 504/178; 504/206, 504/214, 504/362

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 7. Document ID: US 4601744 A

L19: Entry 7 of 28

File: USPT

Jul 22, 1986

US-PAT-NO: 4601744

DOCUMENT-IDENTIFIER: US 4601744 A

TITLE: Esters of N,N'-methylene-bis- [N-[(diaryloxyphosphinyl)methyl]glycine] as herbicides

DATE-ISSUED: July 22, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sikorski; James A.	Kirkwood	MO		
Mischke; Deborah	Creve Coeur	MO		
Dutra; Gerard A.	Ladue	MO		

US-CL-CURRENT: 504/206; 504/175, 558/158, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 8. Document ID: US 4594093 A

L19: Entry 8 of 28

File: USPT

Jun 10, 1986

US-PAT-NO: 4594093

DOCUMENT-IDENTIFIER: US 4594093 A

TITLE: Triester derivatives of N-phosphonomethylthionoglycine as herbicides

DATE-ISSUED: June 10, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sikorski; James A.	Kirkwood	MO		
Schafer; David E.	St. Louis	MO		

US-CL-CURRENT: 504/206; 504/175, 558/169, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 9. Document ID: US 4534784 A

L19: Entry 9 of 28

File: USPT

Aug 13, 1985

US-PAT-NO: 4534784

DOCUMENT-IDENTIFIER: US 4534784 A

TITLE: Method of controlling weed pests

DATE-ISSUED: August 13, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ahle; James L.	San Jose	CA		

US-CL-CURRENT: 504/206

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 10. Document ID: US 4483705 A

L19: Entry 10 of 28

File: USPT

Nov 20, 1984

US-PAT-NO: 4483705

DOCUMENT-IDENTIFIER: US 4483705 A

TITLE: Alkylphosphonate diesters and monoesters of N-phosphonomethylglycinate as

herbicides

DATE-ISSUED: November 20, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Purdum; William R.	Maryland Heights	MO		

US-CL-CURRENT: 504/196; 504/206, 548/112, 549/218, 549/221, 558/126, 558/169,
987/105, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWC
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L19: Entry 11 of 28

File: USPT

Oct 9, 1984

US-PAT-NO: 4475942

DOCUMENT-IDENTIFIER: US 4475942 A

TITLE: N-Phosphonomethylglycine derivatives and herbicidal compositions containing them

DATE-ISSUED: October 9, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bakel; Izhak	Ramat Gan			IL

US-CL-CURRENT: 504/206; 548/116, 548/119, 548/190, 548/199, 548/312.7, 548/315.4, 548/323.5, 548/325.1, 549/491, 562/17, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 12. Document ID: US 4464194 A

L19: Entry 12 of 28

File: USPT

Aug 7, 1984

US-PAT-NO: 4464194

DOCUMENT-IDENTIFIER: US 4464194 A

TITLE: Mixed alkylsulfonium salts of N-phosphonomethylglycine

DATE-ISSUED: August 7, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Prisbylla; Michael P.	Richmond	CA		

US-CL-CURRENT: 504/206; 562/17, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 13. Document ID: US 4444581 A

L19: Entry 13 of 28

File: USPT

Apr 24, 1984

US-PAT-NO: 4444581

DOCUMENT-IDENTIFIER: US 4444581 A

TITLE: Enamine derivatives of phosphonic acid esters as herbicides

DATE-ISSUED: April 24, 1984

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Rajendra K.	Maryland Heights	MO		

US-CL-CURRENT: 504/206; 504/202, 558/169, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KM/C
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☐ 14. Document ID: US 4397676 A

L19: Entry 14 of 28

File: USPT

Aug 9, 1983

US-PAT-NO: 4397676

DOCUMENT-IDENTIFIER: US 4397676 A

TITLE: N-Phosphonomethylglycine derivatives

DATE-ISSUED: August 9, 1983

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bakel; Izhak	Ramat Gan			IL

US-CL-CURRENT: 504/206; 562/17, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KM/C
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☐ 15. Document ID: US 4395275 A

L19: Entry 15 of 28

File: USPT

Jul 26, 1983

US-PAT-NO: 4395275

DOCUMENT-IDENTIFIER: US 4395275 A

TITLE: Mono and diesters of N-phosphonomethylglycinates as herbicides

DATE-ISSUED: July 26, 1983

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Purdum; William R.	Maryland Heights	MO		

US-CL-CURRENT: 504/206; 504/196, 544/193, 549/5, 549/6, 558/172, 558/177, 558/180, 987/105, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 16. Document ID: US 4388102 A

L19: Entry 16 of 28

File: USPT

Jun 14, 1983

US-PAT-NO: 4388102

DOCUMENT-IDENTIFIER: US 4388102 A

TITLE: Alkylphosphonate diesters of N-phosphonomethylglycinate as herbicides

DATE-ISSUED: June 14, 1983

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Purdum; William R.	Maryland Heights	MO		

US-CL-CURRENT: 504/206; 544/193, 558/122, 558/169, 987/105, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 17. Document ID: US 4251256 A

L19: Entry 17 of 28

File: USPT

Feb 17, 1981

US-PAT-NO: 4251256

DOCUMENT-IDENTIFIER: US 4251256 A

TITLE: Herbicidal N-substituted ethylene derivatives of N-phosphonomethylglycine

DATE-ISSUED: February 17, 1981

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gaertner; Van R.	Ballwin	MO		

US-CL-CURRENT: 504/202; 504/206, 558/145, 558/168, 560/155, 987/160, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 18. Document ID: US 4226611 A

L19: Entry 18 of 28

File: USPT

Oct 7, 1980

US-PAT-NO: 4226611

DOCUMENT-IDENTIFIER: US 4226611 A

TITLE: N-Phosphonomethylglycine thioester herbicides

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L19: Entry 21 of 28

File: USPT

Feb 20, 1979

US-PAT-NO: 4140513

DOCUMENT-IDENTIFIER: US 4140513 A

TITLE: Sodium sesquiglyphosate

DATE-ISSUED: February 20, 1979

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Prill; Erhard J.	Kirkwood	MO		

US-CL-CURRENT: 504/206; 562/17, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMC](#)☐ 22. Document ID: US 4120689 A

L19: Entry 22 of 28

File: USPT

Oct 17, 1978

US-PAT-NO: 4120689

DOCUMENT-IDENTIFIER: US 4120689 A

TITLE: Benzyl and aryl esters of N-phosphonomethyl glycines, herbicidal compositions and use thereof

DATE-ISSUED: October 17, 1978

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dutra; Gerard A.	Ladue	MO		

US-CL-CURRENT: 504/206; 504/175, 558/134, 558/169, 987/160

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KMC](#)☐ 23. Document ID: US 4119430 A

L19: Entry 23 of 28

File: USPT

Oct 10, 1978

US-PAT-NO: 4119430
DOCUMENT-IDENTIFIER: US 4119430 A

TITLE: N-(2-hydroxyalkyl) derivatives of N-phosphonomethylglycine and herbicidal compositions containing same

DATE-ISSUED: October 10, 1978

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gaertner; Van R.	Ballwin	MO		
Hamm; Philip C.	Glendale	MO		

US-CL-CURRENT: 504/201; 504/203, 504/206, 558/158, 558/175, 560/169, 560/170,
562/14, 562/17, 987/160, 987/168

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 24. Document ID: US 4106923 A

L19: Entry 24 of 28

File: USPT

Aug 15, 1978

US-PAT-NO: 4106923
DOCUMENT-IDENTIFIER: US 4106923 A

TITLE: Phosphonomethyl glycine ester anhydrides, herbicidal composition containing same and use thereof

DATE-ISSUED: August 15, 1978

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Franz; John E.	Crestwood	MO		

US-CL-CURRENT: 504/206; 560/171, 562/14, 987/163

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 25. Document ID: US 4047927 A

L19: Entry 25 of 28

File: USPT

Sep 13, 1977

US-PAT-NO: 4047927
DOCUMENT-IDENTIFIER: US 4047927 A

TITLE: N-(2-hydroxyalkyl) derivatives of N-phosphonomethylglycine and the herbicidal use thereof

DATE-ISSUED: September 13, 1977

INVENTOR-INFORMATION:

☐ 28. Document ID: US 3850608 A

L19: Entry 28 of 28

File: USPT

Nov 26, 1974

US-PAT-NO: 3850608

DOCUMENT-IDENTIFIER: US 3850608 A

TITLE: METHOD OF PLANT GROWTH REGULATION

DATE-ISSUED: November 26, 1974

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hamm; Philip C.	Glendale	MO		

US-CL-CURRENT: 504/175; 504/206

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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L19: Entry 2 of 28

File: USPT

Jan 30, 2001

DOCUMENT-IDENTIFIER: US 6180566 B1

TITLE: Herbicide preparation, a process for producing it and an activating additive for application therewith

Abstract Text (1):

Stable, concentrated herbicide preparation comprising at least one herbicide with at least one amino group, at least one carboxylic acid group and at least one phosphor containing acid group suspended in finegrained form in a liquid phase, and at least 5% a by weight of a dissolved electrolyte; a process for producing said herbicide preparation and an activating additive (adjuvant) for combination with said herbicide preparation. Preferred suspensions comprise the herbicides glyphosate and glufosinate and the electrolyte ammonium sulphate, acting synergistically. It has not hitherto been possible to incorporate high concentrations of synergistic electrolytes in liquid concentrates of said herbicides.

Brief Summary Text (6):

It is well known that ammonium sulphate acts synergistically on the biological effect of glyphosate and glufosinate. For instance the patent literature contains many examples of combinations of glyphosate and ammonium sulphate, and in practice the farmer usually adds supplementary ammonium sulphate when diluting the glyphosate for use.

Brief Summary Text (7):

Danish patent application no. 2348/88 describe liquid, aqueous solutions of glyphosate with ethoxylated monoamines as surfactants. The possibility of dissolving additional ammonium sulphate exists, but this will lead to a lowering of the dissolvable quantity of glyphosate. Therefore, the maximum amount of glyphosate in a solution containing 280 g/l ammonium sulphate is approximately 120 g/l.

Brief Summary Text (8):

UK patent application GB 2.233.229 A describes a similar system, the ethoxylated monoamines being replaced by ethoxylated diamines. The typical, aqueous solutions contain 200 g/l ammonium sulphate and 75 g/l of glyphosate as its isopropylammonium salt.

Brief Summary Text (9):

UK patent application GB 2.245.170 A claims solutions of glyphosate containing ethoxylated phosphate esters as surfactants. In the examples, where ammonium sulphate has been added supplementary to the formulation in amounts of 200-300 g/l, the glyphosate constitutes 75 g/l corresponding to 100 g/l of the isopropylammonium salt.

Brief Summary Text (10):

In European patent application EP 441.764 A1 is mentioned, that alkoxyated, quaternary ammonium compounds especially coethoxylated-propoxylated quaternary ammonium compounds, is environmentally more acceptable and less skin and eye irritating than ethoxylated fatty amines. It is stated, that aqueous solutions of glyphosate in combinations with said surfactants also can contain ammonium sulphate, but no examples with such formulations are given. On the other hand two solid compositions containing ammonium sulphate are described.

Brief Summary Text (11):

In European patent application EP 498.785 A1 glyphosate formulations are mentioned, which contain esters of sorbitol and fatty acids as surfactants in combination with another surfactant. It is mentioned, that these formulations whether aqueous solutions or solid, finely distributed formulations may also contain ammonium sulphate or other inorganic ammonium salts. The system, however, seems to be best suited for solid formulations.

Brief Summary Text (12):

European patent application EP 498.145 A1 describes solid compositions containing glyphosate as free acid or salt, an inorganic ammonium salt (preferably ammonium sulphate) and alkyl-glycoside or alkylpolyglycoside as surfactant.

Brief Summary Text (13):

European patent application EP 448.538 A1 describes combinations of glyphosate and oxyfluorfen in solid formulations, additionally containing ammonium sulphate and other inorganic compounds.

Brief Summary Text (14):

International patent application WO 92/12637 deals with solid, preferably extruded or granulated formulations containing glyphosate in combination with alkaline compounds. A reaction takes place between the glyphosate and the alkaline compound either during the production process or during the subsequent mixing with the diluent water to totally or partly neutralize the glyphosate as salt whereby it dissolves easier and more quickly. The formulations shown besides comprise surfactants and frequently ammonium sulphate.

Brief Summary Text (15):

In danish patent application no. 6490/89 solid formulations of glyphosate in acid form containing a saturated C.sub.16-18 -fatty alcohol, being ethoxylated with approximately 25 moles ethyleneoxide are described. The formulations may additionally contain supplementary ammonium sulphate.

Brief Summary Text (17):

European patent application 243.872 A1 discloses pesticide preparations, comprising inter alia glyphosate dispersed in an oil containing, liquid phase. The addition to the formulations of ammonium sulphate is not mentioned.

Brief Summary Text (18):

French patent application 2.661.315 discloses the suspension of glyphosate and derivatives thereof in an organic solvent. The organic solvent might be water miscible, and it is mentioned that up to 50% of the solvent may be replaced by water. Furthermore the composition may comprise ammonium sulphate, which is characterized as an adjuvant. The form of the ammonium sulphate of the composition is not apparent from the description, but in the 5 examples of the application, the ammonium sulphate together with the glyphosate compound seems to be totally suspended or dissolved only to a limited extent in the liquid phase.

Brief Summary Text (19):

International patent application WO 92/21686 describes the production of trimethylsulfonium salt of glyphosate for instance by the reaction of glyphosate trimethylsulfonium hydrogen sulphate with an alkaline compound like ammonia. The application does not mention herbicidal suspensions in relation to the present invention. No description is found, neither in the patent description nor in the examples, of significant amounts of glyphosate being at any time suspended in an electrolyte solution and certainly not in a stable form. The principles of the present invention for formulating glyphosate, seem never to have been considered.

Brief Summary Text (20):

Many of the examples shown demonstrate the desirability of combining the herbicides glyphosate or glufosinate with ammonium sulphate and selected surfactants in one and the same formulation. Advantageously the formulation is as concentrated as possible.

Brief Summary Text (21):

As far as liquid, dissolved formulations are concerned, the ammonium sulphate has a

salting-out effect on the dissolved salts of glyphosate and glufosinate, as well as on the dissolved surfactants, and an upper limit exists of the concentration of the solution dependent on the actual surfactant. Environmental requirements on the detergents, for instance as to biodegradability, poor toxicity towards fishes and low skin and eye irritation may reduce still further the number of relevant wetting agents. Besides, the various surfactants differ significantly in their promotion of the biological effect of glyphosate and glufosinate.

Brief Summary Text (22):

Therefore, the trend in recent developments is towards solid, finely dispersed and non-dusty formulations. Although the solubility of ammonium sulphate in water is big, the speed of dissolution of ordinary, commercial, crystalline ammonium sulphate in water in practice is hardly acceptable. Consequently, the crystalline ammonium sulphate frequently needs to be grinded before being mixed with glyphosate or glufosinate or preferably a salt thereof, the selected surfactant(s) and additive(s) being subsequently added. Amongst the additives adhesives, absorbing fillers or anticaking agents should be mentioned, which are necessary to obtain a finely dispersed, non-caking and easily flowing, solid formulation of adequate storage stability. For these processes an expensive formulation equipment is necessary.

Brief Summary Text (33):

Herbicides with at least one primary, secondary and/or tertiary amino group, at least one carboxylic acid group and at least one phosphor containing acid group normally have a relatively high solubility in water: about 0.1 corresponding to 1000 ppm or more, preferably at least 0.4% corresponding to 4000 ppm; by way of example the solubility of glyphosate is approximately 1% by weight in pure water at 20.degree. C.

Brief Summary Text (36):

The fact, that the grinding can take place without viscosity problems, even when no surfactant is added, is probably an essential condition for realising the invention. Even if a surfactant were added, the salting out from the electrolyte of the compound would generally be so extensive, that the wetting effect of the insignificant amount still dissolved in the water phase would be too small to influence significantly on the grinding. The surfactant, however, is still desirable. As mentioned above said surfactant is necessary to ensure the optimum, biological effect of the formulation, and it might contribute to the stabilization of the final formulation, i.e. ensure that the formulation remains homogenous and does not separate. Apparently the finely grinded suspended herbicide and the added, finely distributed surfactant mutually interact to produce a mixture of an advantageous pseudoplastic or thixotropic character. Accordingly, it is possible to produce stable formulations comprising as the sole components water with dissolved electrolyte, suspended glyphosate and surfactant. It is even possible to produce stable suspensions using no surfactants at all.

Brief Summary Text (43):

d) In suspension preparations the amount of suspended solid material in a liquid phase must be below a certain upper limit. Normally the practical limit is about 500 g/l suspension. In glyphosate preparations containing ammonium sulphate the desired content of ammonium sulphate as well as that of glyphosate is high, and this is not possible to obtain if both compounds are to be suspended. When the ammonium sulphate is dissolved in the water phase and the glyphosate only is dispersed herein, it is possible to increase the amounts of ammonium sulphate as well as glyphosate.

Brief Summary Text (51):

Specially preferred herbicides are glyphosate (N-(phosphonomethyl)-glycine), glufosinate (4-(hydroxy(methyl)phosphinoyl)-DL-homoalanine), bilanafos (4-hydroxy(methyl)phosphinoyl)-L-homoalanyl-L-alanyl-L-alanine and/or glyphosine (N,N-bis(p-hosphonomethyl)glycine), compare claim 4.

Brief Summary Text (58):

The invention also relates to stable, activating additives (adjuvants) on concentrated form, said adjuvants being active when admixed with glyphosate- and/or glufosinate preparations for combatting weeds, and said additives comprising at least one surfactant in an amount of 4-58% by weight, said surfactant being

emulsified, suspended and/or dissolved in a liquid, aqueous phase; the composition of the adjuvant being further characterized by comprising at least one undissolved, fine-grained, not biologically active viscosity regulating filler acting to prevent separation of the surfactant, said viscosity regulating filler comprised in an amount of min. 0.3% by weight, and said liquid, aqueous phase being characterized by comprising an electrolyte, which is dissolved in the liquid, aqueous phase and, which is not a surfactant, in an amount of min. 5%, compare claim 19.

Brief Summary Text (59):

Such a stable, activating additive is in a way an intermediate for the production of a concentrated suspension of glyphosate and/or glufosinate according to the invention, since the herbicide suspension can be produced from the additive simply by admixing finely grinded herbicide.

Brief Summary Text (60):

To produce the herbicidal solution/suspension for use, the farmer may make use of the additive, too. He just has to mix it with a glyphosate- or a glufosinate preparation. The form of the herbicide is of minor importance in this connection, for instance a finely grinded powder, a solid granulate, a solution in an appropriate solvent or even a suspension may be used.

Brief Summary Text (72):

Preferred herbicidal compositions are such, in which the selected herbicide is glyphosate or glufosinate, and the selected electrolyte is ammonium sulphate.

Brief Summary Text (81):

Other preferred non-ionic surfactants are the ethoxylated, propoxylated or co-ethoxylated/propoxylated vegetable oils as for example ricinus oil; fatty acid esters of polyalcohol as for example sorbitol, in itself an emulsifier, which can be alkoxylated further (ethoxylated, propoxylated or co-ethoxylated/propoxylated); monoglycerides, diglycerides and polyalcoholates of natural fatty acids, which can be esterified further with C.sub.1-4 -monocarboxylic acid (e.g. acetic acid), C.sub.1-10 -dicarboxylic acid (e.g. adipic acid) and C.sub.1-6 -hydroxycarboxylic acid (e.g. lactic acid), and which can be alkoxylated further. Among other non-ionic wetting agents of relevance N-C.sub.4-16 -alkylpyrrolidone, specially N-C.sub.8-16 -alkylpyrrolidone, hydrocarbylcarboxylic amide and alkoxylated variants hereof; alkoxylated hydrocarbylmercaptane, alkoxylated thiophenol and alkoxylated thionaphthol should be mentioned.

Brief Summary Text (90):

The present invention does not relate to the final dilutions made at the user level. The invention relates to concentrates only, being herbicide preparations or activating additives, which according to the invention are formulated in a new and more advantageous way. Since dilutions of use, made from the concentrates to a certain extent are well known, because they can be obtained by separate addition of ammonium sulphate to known products, and they are known to possess a particularly satisfying biological effect, it seems redundant to prove the effect of the described compositions. There might be differences in the pH-values of the dilutions. For instance the pH-value of the herbicide preparations according to the invention is frequently low, because the glyphosate is preferably used in its non-neutralized form, but this fact is known to be of no biological importance. Reference is made in this connection to Danish patent application 6490/89, specially dealing with glyphosate on non-neutralized form.

Brief Summary Text (107):

Specially preferred herbicide suspensions comprise glyphosate suspended in ammonium sulphate, said suspensions being produced by adding sulfuric acid to solutions of the ammonium salt of glyphosate or adding ammonia to a solution of the sulfuric acid salt of glyphosate, preferably while cooling and continuously stirring.

Brief Summary Text (112):

The amount of the herbicide, for instance glyphosate or glufosinate, constitutes 0.2-4 kg/ha, preferably 0.3-3 kg/ha, especially 0.5-2.2 kg/ha and specially 0.8-1.5 kg/ha, calculated on an active ingredient basis.

Detailed Description Text (2):

Experiments 1-5 (see table A) demonstrates the suspension of glyphosate in free, non-neutralized form in an aqueous solution of ammonium sulphate. Calculated on the aqueous solution the amount of ammonium sulphate is 40% in all 5 experiments corresponding to a saturation in water at approximately 0.degree. C. In all of the examples, ethoxylated fatty amines are used as surfactants.

Detailed Description Text (3):

For the manufacture of the compositions 1 and 2 the Genamine (the ethoxylated fatty amine) was initially dissolved in a part of the water, following which the pH was adjusted with concentrated sulfuric acid to pH=3.5. The rest of the water was then added and subsequently the ammonium sulphate was stirred in, leading to the precipitation of the chief of the Genamine. The mixture was transferred as quantitatively as possible to a mini-mill with a volume of maximally 50 ml from the company Eiger Engineering Ltd., Warrington, Cheshire, England, being filled with 1-2 mm zirkonium oxide pearls. The mill was started immediately at its highest speed, and the addition of glyphosate was started. After 5 minutes all glyphosate was added. The grinding was continued for further approximately 10 minutes. Attagel was added, and the grinding was continued for maximally 5 minutes.

Detailed Description Text (4):

For the manufacture of the compositions 3, 4 and 5, the ammonium sulphate was initially dissolved in the total amount of water, following which the concentrated sulfuric acid was added, and the solution was transferred to the mini-mill. The mill was started at its highest speed, following which the addition of glyphosate was started. After 5 minutes all glyphosate was added. The grinding was continued for further approximately 10 minutes. Genamin was added immediately followed by Attagel, and the grinding was continued for approximately 5 minutes.

Detailed Description Text (6):

Samples of the above compositions were stored in 100 ml glass bottles with screw caps for 1 to approximately 4 weeks before the beginning of the accelerated testing. It was initially evaluated, whether the sample had separated a clear aqueous phase, and whether the surfactant had separated out on its own. The results of all evaluations are listed in table A. Subsequently the sample was shaken. The viscosity was visually evaluated, and the average particle size of the grinded glyphosate particles was estimated microscopically at 256.times.. (It is very difficult to use a particle sizer for so many samples, because the samples must be measured in concentrated salt solutions possibly further saturated with glyphosate, in order to ensure, that the samples are not dissolved in the water. It is also important that the concentrated salt solution does not contain undissolved impurities, which might disturb the measurements). It was also estimated, whether the added surfactants had separated out as oily drops. If so, the estimated size of the drops was noted. If no oily drops could be observed, a "n.d." (not detected) is stated in the table. It should be noted, that any microscopic airbubbles present may give rise to a false positive result.

Detailed Description Text (18):

After this testing period both groups of samples were cooled to ambient temperature and evaluated as mentioned above. Supplementary the speed of dissolution was determined as follows: 1 ml suspension was pipetted off and placed in a 150 ml beaker containing 100 ml deionized water. The mixture was stirred on a magnetic stirrer of moderate speed using a 4 cm magnet so as to produce an approximately 1 cm deep vortex in the diluent water, and the period of time until no more undissolved glyphosate could be observed was measured in seconds. All observations are listed in table A.

Detailed Description Text (24):

Experiments 6-10, 11-15, 16-20, 21-25 and 26-29 in the tables B, C, D, E, and F describe glyphosate compositions comprising various surfactants in varying amounts. The ratio glyphosate/surfactant is about 2/1 corresponding to the usual ratio in most commercial products. The amount of finely distributed fillers varies from 0 to 2% by weight. In all of the experiments the amount of the electrolyte ammonium sulphate is varying from app. 20 to 27% by weight. The grinding is performed in a mini-mill as described for the samples 3-5 in table A, the sulfuric acid addition,

however, being omitted.

Detailed Description Text (30):

Experiments 31-35, 36-40, 41-45 and 46-49 in the tables G, H, I and J relate to various glyphosate compositions. Experiments 31-33 (table G) relate to compositions with ammonium salts different from ammonium sulphate. Experiments 34 and 35 (table G) relates to compositions comprising herbicide only suspended in an electrolyte solution. Experiments 36-40 (table H) show the use of potassium thiocyanate, sodium bromide and ammonium acetate as electrolyte. In the experiments 36 and 37, one of the acid groups in glyphosate is transformed into the sodium salt. In experiment 38, a little amount only of glyphosate is transformed into the sodium salt. In experiments 39 and 40, one of the acid groups in glyphosate is transformed into its ammonium salt. The experiments 41-45 (table I) relate to compositions comprising viscosity regulating, hygroscopic compounds. These are glycerine, propylene glycol, polyethylene glycol and lactic acid. Obviously the addition of these to the aqueous phase caused no tendency to separation of undissolved electrolyte. Experiments 46 and 47 relate to compositions further comprising oil. Experiment 48 and 49 relate to compositions comprising herbicide suspended in an electrolyte solution and small amounts of a viscosity regulating filler, but no surfactant.

Detailed Description Text (35):

In the experiments 46 and 47, the oils apparently do not disperse onto the grinded glyphosate, unlike the surfactants. This conclusion is based partly on the microscopy and partly on the experiment 46, in which the sample, which had been stored at varying temperatures, at the end of the experiment had separated two upper, clear phases. This was not observed in experiment 47. In both samples, the oil was uniformly re-distributed in the compositions after shaking.

Detailed Description Text (52):

The product of example 60 has been produced by initially dissolving the ammonium sulphate in water (40% ammonium sulphate solution) followed by admixture of propylene glycol, leading to a precipitation of ammonium sulphate. The stirring on the mini-mill was started, and the glyphosate was added in the usual way followed by admixture of Genapol OX-130.

Detailed Description Text (54):

At normal temperatures an ammonium sulphate solution comprises approximately 40% ammonium sulphate. In experiment 61 20 g ammonium sulphate was dissolved in the water phase followed by addition of propylene glycol, causing a precipitation of ammonium sulphate. Another 20 g ammonium sulphate was finely grinded in a blender with a view to adding it slowly during grinding before the addition of glyphosate, before the addition of Genapol and after the addition of Genapol, respectively.

Detailed Description Text (58):

A preferred composition of glyphosate in electrolyte solution comprises the following:

Detailed Description Text (59):

169.1 g glyphosate

Detailed Description Text (64):

169.1 g glyphosate is dissolved in 266 g water and 80 g aqueous 25% w/w ammonia solution together with 159.4 g ammonium sulphate in a beaker and is transferred to another container under vigorous stirring.

Detailed Description Paragraph Table (2):

TABLE A Experiment no. 1 2 3 4 5										Compo- nents Composition in % Deionized																																																																																															
41.0	41.0	40.8	water	Ammonium	27.8	27.4	27.4	27.4	27.2	41.6	41.1	20.8	20.8	20.8	20.4	98%	Genamin T	6.9	6.8	150	(1)	Genamin O	6.8	80	(2)	Genamin C	6.8	100	(3)	Genamin C	6.8	020	(4)	Sulfuric	app.	1.5	app.	1.4	2.1	2.1	2.7	acid, 98%	Attagel	(5)	1.4	2.7	2.1	2.1	2.1	Total weight	144	146	146	146	147	(g)	Density	1.30	1.29	1.28	1.28	1.25	(g/ml)	<u>Glyphosate</u>	270	266	264	264	255	(g/l)	Ammonium	361	353	351	351	340	sulphate	(g/l)	Evaluation	before storage	Appearance	15% upp.	10% upp.	10% upp.	10% upp.	10% upp.	10% upp.	cl. phase	cl. phase	cl. phase	cl. phase	cl. phase	cl. phase	cl. phase	Viscosity	pseudo-	slightly	slightly	pseudo-	pseudo-	plastic	viscous	viscous	plastic	plastic

Detailed Description Paragraph Table (3):

Detailed Description Paragraph Table (4):

Detailed Description Paragraph Table (5):

TABLE D Experiment no. 16 17 18 19 20 Component Composition in % Deionized 40.5 40.8														
40.8	40.5	40.5	water	Ammonium	27.0	27.2	27.2	27.0	27.0	sulphate	Glyphosate,	20.3		
20.4	20.4	20.3	20.3	98%	Ethoquad	10.2	C/25 (6)	Arkopon T	10.2	hockonc.	(17)	Berol		
987	10.2	(18)	Surfadon LP	10.2	300	(19)	Aerosil R	1.4	972	(20)	Attagel	(5)	2.0	1.4
2.0	2.0	Total weight	148	147	147	148	148	(g)	Density	1.26	1.26	1.28	1.27	1.26 (g/ml)
Glyphosate	256	257	261	258	256	(g/l)	Amm.	340	343	348	343	340	sulphate	(g/l)
Evaluation before storage	Appearance	no se-	no se-	10% lower	no se-	no se-	no se-	paration						
paration cl.	phase	paration	paration	Viscosity	slightly	pseudo-	pseudo-	pseudo-						
pseudo-	viscous	plastic	plastic	plastic	plastic	Particle	app.	10	10-15	app.	10	app.		
10 app.	10 size	(.mu.m)	Oil drops	n.d.	n.d.	n.d.	<25	n.d.	(.mu.m)	Speed of	25-100			

25-100 n.d. 25-100 <25 dissol. (s) Evaluation after storage at various temperatures
 Appearance 10% upp. 30% upp. 15% lower no se- no se- cl. phase cl. phase cl. phase
 paration paration Viscosity suffici- pseudo- pseudo- pseudo- pseudo- ently plastic
 plastic plastic plastic Particle 5-10 app. 10 app. 10 app. 10 app. 10 size (.mu.m)
 Oil drops n.d. n.d. n.d. <25 n.d. (.mu.m) Speed of 3 3 14 2 13 dissol. (s) Evaluation
 after storage 14 days at 55.degree. C. Appearance no se- 10% upp. no se- no se- no
 se- paration cl. phase paration paration paration Viscosity slightly pseudo-
 slightly pseudo- some viscous plastic viscous plastic viscous Particle 5-10 10-15
 5-10 10-15 5-10 size (.mu.m) Oil drops n.d. n.d. n.d. 25-100 n.d. (.mu.m) Speed of 5
 2 19 4 20 dissol. (s)

Detailed Description Paragraph Table (6):

TABLE E Experiment no. 21 22 23 24 25 Component Composition in % Deionized 40.5 41.4
 40.0 38.7 38.2 water Ammonium 27.0 27.6 26.7 25.8 25.5 sulphate Glyphosate, 20.3
 20.7 20.0 19.4 19.1 98% Berol OX 10.2 10.3 13.3 16.1 15.9 45-11 (21) Attagel (5) 2.0
 1.3 Total weight 148 145 150 155 157 (g) Density 1.26 1.26 1.26 1.25 1.25 (g/ml)
Glyphosate 256 261 252 243 239 (g/l) Ammonium 340 348 337 323 319 sulphate (g/l)
 Evaluation before storage Appearance no se- 15% lower 15% lower 15% lower 10% lower
 paration cl. phase cl. phase cl. phase cl. phase Viscosity pseudo- easily easily
 easily slightly plastic viscous Particle app. 15 10-15 app. 15 10-15 app. 10 size
 (.mu.m) Oil drops <25 25-100 <25 25-100 25-100 (.mu.m) Evaluation after storage at
 various temperatures Appearance 5% upp. 35% upp. 30% inner 20% lower 5% inner cl.
 phase cl. phase cl. phase cl. phase Viscosity clearly very ea- easily
 suffici- pseudo- pseudo- sily ently plastic plastic Particle 10-15 10-15 10-15 10-15 10-15
 app. 10 size (.mu.m) Oil drops <25 n.d. n.d. n.d. n.d. (.mu.m) Speed of 3 2 2 2 3
 dissol. (s) Evaluation after storage 14 days at 55.degree. C. Appearance no se- 30%
 upp. 15% inner 15% lower 10% lower paration cl. phase cl. phase cl. phase cl. phase
 Viscosity clearly very ea- easily suffici- pseudo- pseudo- sily ently plastic
 plastic Particle 10-15 10-15 app. 15 10-15 10-15 size (.mu.m) Oil drops <25 n.d. .
 25-100 n.d. 25-100 (.mu.m) Speed of 10 1 1 2 3 dissol. (s)

Detailed Description Paragraph Table (7):

TABLE F Experiment no. 26 27 28 29 30 Component Composition in % Deionized water 40.8
 40.5 40.9 47.2 40.5 Ammonium sulphate 27.2 27.0 27.3 20.3 27.0 Glyphosate, 98% 20.4
 20.3 20.5 20.3 20.3 Marlupal 1618/25 (22) 10.2 Radasurf 7417 (23) 10.2 Berol OX
 45-11 (21) 10.3 10.2 Berol 533 (24) 10.2 Aerosil R 972 (20) 1.0 Attagel (5) 1.4 2.0
 2.0 2.1 Total weight (g) 147 148 146.5 148 148 Density (g/ml) 1.27 1.28 1.26 1.22
 1.26 Glyphosate (g/l) 345 346 258 248 256 Ammonium sulphate 259 260 344 248 340
 (g/l) Evaluation before storage Appearance no separation no separation no separation
 no separation no separation Viscosity slightly slightly pseudo- pseudo- pseudo-
 viscous viscous plastic plastic plastic Particle size (.mu.m) app. 15 app. 15 app.
 10 app. 15 app. 15 Oil drops (.mu.m) n.d. 25-100 25-100 25-100 <25 Evaluation after
 storage at various temperatures Appearance 10% upp. 15% upp. 30% upp. 30% upp. 15%
 upp. cl. phase cl. phase cl. phase cl. phase Viscosity clearly pseudo-
 pseudo- pseudo- suffici- pseudo- plastic plastic plastic ently plastic Particle size
 (.mu.m) 10-15 app. 10 app. 10 10-15 app. 10 Oil drops (.mu.m) n.d. n.d. 25-100 n.d.
 n.d. Speed of dissol. (s) 2 2 2 2 3 Evaluation after storage 14 days at 55.degree.
 C. Appearance no separation no separation no separation 20% upp. no separation cl.
 phase Viscosity slightly pseudo- pseudo- easily viscous* viscous plastic plastic
 Particle size (.mu.m) 10-15 app. 10 app. 10 app. 15 app. 10 Oil drops (.mu.m) n.d.
 n.d. n.d. n.d. n.d. Speed of dissol. (s) 7 3 2 2 17 *Screw cap leaky, crystals from
 the liquid observed.

Detailed Description Paragraph Table (8):

TABLE G Experiment no. 31 32 33 34 35 Component Composition in % Deionized 27.4 34.0
 40.5 36.9 33.1 water Ammonium 41.1 17.0 sulfamate Ammonium 17.0 24.6 22.1 sulphate
 Ammonium 27.0 nitrate Glyphosate, 20.5 20.4 20.3 38.5 44.8 98% Berol OX 10.3 10.2
 10.2 45-11 (21) Attagel (5) 0.7 1.4 2.0 Total weight 146 147 148 130 145 (g) Density
 1.35 1.29 1.25 1.33 1.38 (g/ml) Glyphosate 277 263 254 512 618 (g/l) Electrolyte 555
 439 338 327 305 (g/l) Evaluation before storage Appearance 10% lower no se- no se-
 20% upp. 10% upp. cl. phase paration paration cl. phase cl. phase Viscosity easily
 slightly easily passende slightly viscous viscous viscous Particle app. 15 10-15
 10-15 20-25 app. 20 size (.mu.m) Oil drops 20-100 25-100 25-100 n.d. n.d. (.mu.m)
 Evaluation after storage at various temperatures Appearance 25% lower 10% upp. 30%
 upp. 30% upp. 20% upp. cl. phase cl. phase cl. phase cl. phase cl. phase Viscosity

Detailed Description Paragraph Table (9):

Detailed Description Paragraph Table (10):

Detailed Description Paragraph Table (11):

TABLE J Experiment no. 46 47 48 49 Component Composition in % Deionized water 38.0												
38.0	40.5	57.6	Ammonium sulphate	25.3	25.3	27.0	14.3	Glyphosate, 98%	19.0	19.0	30.5	
25.2	Berol 02 (13)	6.3	6.3	Hydropar 19 (25)	9.5	Radia 7131 (26)	9.5	Attagel	1.9	1.9		
2.0	2.9	Total weight (g)	158	158	148	139	Density (g/ml)	1.22	1.21	1.34	1.22	
		Glyphosate (g/l)	232	230	409	174	Ammonium sulphate	309	306	362	307	Evaluation
		before storage	Appearance	10% lower	15% lower	no se-	10% upp.	cl.	phase	cl.	phase	
		paration	cl.	phase	Viscosity	suffici-	suffici-	pseudo-	easily	ently	ently	plastic
		Particle size (.mu.m)	app.	20	app.	15	10-15	20-25	Oil drops (.mu.m)	>100	25-100	n.d.
		n.d.	Evaluation after storage at various temperatures	Appearance	30%	2	30%	lower	10%			
		upp.	10% upp.	upp.	cl.	cl.	phase	cl.	phase	cl.	phase	phases
		pseudo-	pseudo-	easily	ently	plastic	plastic	Particle size (.mu.m)	app.	15	10-15	
		10-15	20-25	Oil drops (.mu.m)	>100	>100	n.d.	n.d.	Speed of dissol. (s)	2	2	22

Evaluation after storage 14 days at 55.degree. C. Appearance 15% lower 20% lower no se- no se- cl. phase cl. phase paration paration Viscosity suffici- pseudo- pseudo-easily ently plastic plastic Particle size (.mu.m) app. 15 app. 15 10-15 20-25 Oil drops (.mu.m) >100 >100 n.d. n.d. Speed of dissol. (s) 4 5 2 4

Detailed Description Paragraph Table (12):

TABLE K Experiment no. 50 51 Component Composition in % Deionized water 42.8 41.7 Ammonium sulphate 28.6 27.8 Mousse 904 SE (28) 0.7 Ethoquad C/25 (6) 25.0 Berol OX 45-11 (21) 27.8 Attagel 40 (5) 3.6 2.0 Total weight (g) 140 144 Density (g/ml) 1.15 1.14 Glyphosate (g/l) -- -- Ammonium sulphate (g/l) 329 317 Evaluation before storage Appearance 10% lower 10% lower cl. phase cl. phase Viscosity sufficiently sufficiently Particle size (.mu.m) -- -- Oil drops (.mu.m) >100 25-100 Evaluation after storage at various temperature Appearance 30% lower 25% lower cl. phase cl. phase Viscosity sufficiently sufficiently Particle size (.mu.m) -- -- Oil drops (.mu.m) n.d. n.d. Evaluation after storage 14 days at 55.degree. C. Appearance 10% lower 5% lower cl. phase cl. phase Viscosity sufficiently sufficiently Particle size (.mu.m) -- -- Oil drops (.mu.m) n.d. n.d.

Detailed Description Paragraph Table (15):

TABLE N Experiment no. 59 60 61 62 Component Composition in g Deionized water 60.0 30.0 30.0 Ammonium sulphate 40.0 20.0 40.0 40.0 Propylene glycol 30.0 30.0 60.0 Glyphosate, 98% 30.0 30.0 30.0 30.0 Genapol OX 130 (30) 20.0 20.0 20.0 20.0 Viscosity Brook- 1800 3100 -- -- field at 20.degree. C. mPaxs mPaxs

Current US Original Classification (1):

504/206

Other Reference Publication (1):

STN International, Chemical Abstracts, vol. 119, No. 9, "Herbicide glyphosate salt concentrate", Aug. 30, 1993.

CLAIMS:

5. A composition according to claim 1, wherein the herbicide is glyphosate, glufosinate, bilanafos and/or glyphosine.

7. A composition according to claim 1, wherein the herbicide is glyphosate, glufosinate, bilanafos and/or glyphosine in its free, non-neutralized form or completely or partly converted into its respective ammonium salt by reaction with ammonia.

25. An activating additive (adjuvant) in concentrated form for admixture with compositions containing glyphosate- and/or glufosinate for combating weeds, said additive comprising at least one surfactant in an amount of 4-58% by weight being emulsified, suspended and/or dissolved in a liquid, aqueous phase, and at least one undissolved, fine-grained, not biologically active, viscosity regulating filler, said filler acting to prevent the separation of the surfactant and being present in an amount of at least 0.3% by weight, characterized by comprising an electrolyte, which is dissolved in the liquid, aqueous phase and, which is not a surfactant, in an amount of at least 5% by weight.